KiFF # 43873
Submitted to RAM with
[illegible] 10-6-05 ATK

SECOND QUARTER 2005
GROUND-WATER MONITORING REPORT
Tesoro Site #67058; LOP No: 14-694
921 West Hamilton Avenue
Campbell, California

July 29, 2005
AZ142-020

Prepared for:
Tesoro Environmental Resources Company
3450 S. 344th Way #201
Auburn, WA 98001

AZURE ENVIRONMENTAL

TESORO

Tesoro Petroleum Companies, Inc.
3450 South 344th Way, Suite 201
Auburn, WA 98001-5931
253 896 6700
253 896 6887 Fax

July 29, 2005

Mamerto Jorvina
Santa Clara County – Dept. of Env. Health
1555 Berger Drive, Suite 300
San Jose, California 95112-2716

RE: Second Quarter 2005 Ground-Water Monitoring Report Tesoro Site #67058; No: 14-694 921 West Hamilton Avenue, Campbell, California

Dear Mr. Jorvina:

Enclosed please find a copy of the quarterly monitoring report for the subject site located at 921 West Hamilton Avenue, Campbell, California. This report is submitted by Azure Environmental on behalf of Tesoro Environmental Resources Company.

Based on my inquiry of the person or persons directly responsible for gathering the information contained in this report, I believe the information was prepared by qualified personnel who properly gathered and evaluated the information, and that the information submitted is, to the best of my knowledge and belief, true, correct, and complete.

Please feel free to call me at 253/896-8700 or Jeff Hennier of Azure Environmental at 415/460-1561 if you have any questions.

Sincerely,

Jeffrey M. Baker, P.E.
Tesoro Environmental Resources Company

cc: Celia Norman, SCVWD
Chuck Miller, USA Petroleum
Brian Kelleher, Kelleher & Associates

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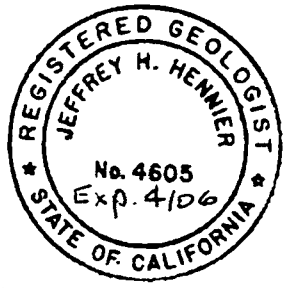
SIGNATURE PAGE

All hydrogeologic and geologic information, conclusions, and recommendations contained in this report have been prepared by a California Certified Hydrogeologist.



Jeff Hennier
Principal Hydrogeologist
California Professional Geologist (4605)
California Certified Hydrogeologist (105)

Date: July 29, 2005

AZURE ENVIRONMENTAL

July 29, 2005 AZ142-020

SECOND QUARTER 2005 GROUND-WATER MONITORING REPORT
Tesoro Site #67058; No: 14-694
921 West Hamilton Avenue
Campbell, California

1.0 INTRODUCTION

This Second Quarter 2005 Ground-Water Monitoring Report was prepared on behalf of Tesoro Environmental Resources Company (Tesoro) for the Tesoro Site #67058 (former Beacon Station #3786) at 921 West Hamilton Avenue in Campbell, California ("the Site"; Figure 1). Ground-water monitoring was performed at the Site pursuant to the request of the Santa Clara County Department of Environmental Health (SCCDEH) in their letter to Tesoro and Green Valley Gasoline dated February 1, 2005. This report presents the results of ground-water monitoring performed at the Site for the period of April 1 through June 30, 2005. This report also contains a technical status summary of the work completed at the Site during the reporting period and work anticipated to be performed during July through September, 2005.

2.0 GROUND-WATER MONITORING RESULTS

Ground-water monitoring performed at the Site consisted of the following activities:

- Collection of ground-water level measurements from monitoring well MW-1.
- Collection and laboratory analysis of ground-water samples from Site monitoring wells.

2.1 Ground-Water Elevations and Flow Direction

Water-level measurements and calculated ground-water elevations were collected from monitoring wells MW-1 through MW-4 on May 17, 2005. Monitoring well construction data are summarized in Table 1; water-level measurement and calculated ground-water elevation data are summarized in Table 2. Ground-water elevations from Site monitoring wells were used to construct a water table elevation contour map (Figure 2).

Ground-water level data indicate the depth to ground water measured in the monitoring wells on May 17, 2005 varied between 47.85- and 49.00-feet below grade. These data indicate higher ground-water levels at the Site compared to previous water level measurements collected in March 2005 (approximately 2.22-feet higher at well MW-1). Water-table elevation data collected at the Site indicate the general direction of ground-water flow is toward the east-northeast (Figure 2). Shallow ground water in the site vicinity flows toward the east-northeast under a calculated horizontal hydraulic gradient of approximately 0.008 ft/ft. These data are generally consistent with potentiometric data and interpretations of ground-water flow direction at the Site presented in previous investigation and monitoring reports.

2.2 Ground-Water Sampling and Laboratory Analysis

Ground-water samples were collected from monitoring well MW-1 on May 17, 2005. Monitoring well MW-1 is located adjacent to fuel USTs at the Site (Figure 2). Ground-water samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds and fuel oxygenates, including methyl tertiary-butyl ether (MTBE). Laboratory analysis results are summarized in Table 3; laboratory certificates are included in Appendix A and field sampling data sheets are included in Appendix B. Most recent ground-water monitoring data are illustrated in Figure 3.

Second quarter 2005 ground-water monitoring data indicate low to trace concentrations of petroleum hydrocarbons continue to be detected at well MW-1 (Table 3; Figure 3). MTBE and other fuel oxygenates were not detected and have never been detected at monitoring wells MW-1 through MW-4 (Table 3). Relatively low TPHg (1,100 ug/l) and benzene (3.5 ug/l) concentrations were detected at well MW-1. The second quarter 2005 sampling results for well MW-1 revealed lower concentrations than the previous quarter sampling results collected in March 2005 (1,400 ug/l and 4.1 ug/l, respectively). Previous monitoring data indicate petroleum hydrocarbons were not detected at downgradient wells MW-2 through MW-4 (Table 3).

3.0 TECHNICAL STATUS REPORT

Work completed during the second quarter 2005 and work expected to be completed during the third quarter 2005 includes continued performance of the ground-water monitoring program.

AZURE ENVIRONMENTAL

4.0 SELECTED REFERENCES

Alton Geoscience, 1996. Quarterly Progress Report, Fourth Quarter 1995, Former Exxon RAS #7-7121, 921 West Hamilton Avenue, Campbell, California. January 5.

Azure Environmental, 2003a. Workplan for Environmental Monitoring for MTBE, Tesoro Site #67058, File No. 1280.01-005 (BGS), 921 West Hamilton Avenue, Campbell, California. March 13.

Azure Environmental, 2003b. Soil and Ground-Water Investigation Report, Tesoro Site #67058, File No. 1280.01-005, 921 West Hamilton Avenue, Campbell, California. July 14.

Azure Environmental, 2004. First Quarter 2004 Monitoring Report and Additional Investigation Workplan, Tesoro Site #67058, File No. 1280.01-005, 921 West Hamilton Avenue, Campbell, California. March 3.

Azure Environmental, 2004. Second Quarter 2004 Monitoring Report and Additional Investigation Report, Tesoro Site #67058, File No. 1280.01-005, 921 West Hamilton Avenue, Campbell, California. July 30.

Azure Environmental, 2004. Third Quarter 2004 Monitoring Report and Recommendation for No Further Action, Tesoro Site #67058, File No. 1280.01-005, 921 West Hamilton Avenue, Campbell, California. October 29.

EA, 1997. Final Report of Quarterly Sampling and Analysis, Former Exxon Retail Site 7-7121, 921 West Hamilton Avenue, Campbell, California. March.

Santa Clara Valley Water District, 1997. Case Closure Summary, Exxon No. 7-7121, 921 West Hamilton Avenue, Campbell, California. January 9.

Santa Clara Valley Water District, 1997. Case Closure Letter, Exxon No. 7-7121, 921 West Hamilton Avenue, Campbell, California. January 28.

TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION DATA
921 West Hamilton Avenue, Campbell, CA

	Monitoring Well			
	MW-1	MW-2	MW-3	MW-4
Date of Well Completion	May-03	May-03	May-03	May-03
DWR No.	NA	NA	NA	07S01W27E035
SCVWD Permit No.	03W00294	03W00295	03W00296	03W00297
Well type	Monitoring	Monitoring	Monitoring	Monitoring
Currently extracting	No	No	No	No
Top of Casing Elevation (ft MSL)	184.47	184.93	184.23	183.7
Latitude	37°17'40.00"N.	37°17'40.54"N.	37°17'40.34"N.	37°17'40.18"N.
Longitude	121°57'56.97"W	121°57'56.31"W	121°57'56.12"W	121°57'55.99"W
Northing	1933020	1933074	1933054	1933038
Easting	6135288	6135342	6135357	6135368
Casing Diameter (in.)	2	2	2	2
Total Well Depth (ft.)	70	70	70	70
Bottom Casing Elev. (ft MSL)	114.47	114.93	114.23	113.70
Slotted Casing Depth Interval (ft)	50 - 70	50 - 70	50 - 70	50 - 70
Slotted Casing Elev. Interval (ft MSL)	134.47 - 114.47	134.93 - 114.93	134.23 - 114.23	133.7 - 113.7
Filter Pack Elev. Interval (ft MSL)	136.47 - 114.47	136.93 - 114.93	136.23 - 114.23	139.7 - 113.7
Bentonite Seal Elev. Interval (ft MSL)	138.47 - 136.47	138.93 - 136.93	138.23 - 136.23	141.7 - 139.7
Grout Elev. Interval (ft MSL)	184.47 - 138.47	184.93 - 138.93	184.23 - 138.23	183.7 - 141.7
Casing Type	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC
Slot Type	0.010 - inch	0.010 - inch	0.010 - inch	0.010 - inch
Filter Pack Type	No. 3 sand	No. 3 sand	No. 3 sand	No. 3 sand

NOTES: ft MSL - feet above mean sea level
Wells surveyed to arbitrary site datum by Luk and Associates, Inc. and tied to feet MSL using GPS equipment.
NA - Not Available

TABLE 2
SUMMARY OF GROUND-WATER ELEVATION DATA
921 West Hamilton, Campbell, CA

Well Number	Top-of-Casing Elevation (feet MSL)	Date Measured	Depth to Water (feet)	Water Elevation (feet)	Change in Elevation (feet)
MW-1	184.47	5/23/2003	50.78	133.69	--
		5/27/2003	50.73	133.74	0.05
		1/19/2004	50.92	133.55	-0.19
		5/4/2004	49.43	135.04	1.49
		7/13/2004	50.81	133.66	-1.38
		3/14/2005	50.07	134.40	0.74
		5/17/2005	47.85	136.62	2.22
MW-2	184.93	5/23/2003	51.87	133.06	--
		5/27/2003	51.82	133.11	0.05
		1/19/2004	52.00	132.93	-0.18
		5/4/2004	50.58	134.35	1.42
		7/13/2004	51.93	133.00	-1.35
		3/14/2005	51.17	133.76	0.76
		5/17/2005	49.00	135.93	2.17
MW-3	184.23	5/23/2003	50.92	133.31	--
		5/27/2003	50.87	133.36	0.05
		1/19/2004	51.24	132.99	-0.37
		5/4/2004	49.85	134.38	1.39
		7/13/2004	51.21	133.02	-1.36
		3/14/2005	50.42	133.81	0.79
		5/17/2005	48.25	135.98	2.17
MW-4	183.70	5/23/2003	50.46	133.24	--
		5/27/2003	50.40	133.30	0.06
		1/19/2004	50.84	132.86	-0.44
		5/4/2004	49.50	134.20	1.34
		7/13/2004	50.88	132.82	-1.38
		3/14/2005	50.06	133.64	0.82
		5/17/2005	47.91	135.79	2.15

Notes:
Wells surveyed to arbitrary site datum by Luk and Associates, Inc. and tied to feet MSL using GPS equipment.

TABLE 3
SUMMARY OF GROUND-WATER SAMPLE ANALYSIS RESULTS
921 West Hamilton, Campbell, CA

Sample Location	Date Sampled	Concentration (ug/l)						
		TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Other Fuel Oxygenates
MW-1	5/27/2003	110,000	770	490	2,000	3,400	<10	ND
	1/19/2004	3,400	3.9	<0.5	8.1	4.2	<1	ND
	5/4/2004	1,400	2.4	<0.5	5.4	2.4	<0.5	ND
	7/13/2004	2,300	4.4	<0.5	14	5.6	<0.5	ND
	3/21/2005	1,400	4.1	<0.5	10	4.2	<0.5	ND
	5/17/2005	1,100	3.5	<0.5	8.3	2.8	<0.5	ND
MW-2	5/27/2003	480	4.2	11	3.7	6	<1	ND
	1/19/2004	<50	<0.5	<0.5	<0.5	<1.5	<1	ND
	5/4/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	7/13/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-3	5/27/2003	<50	<0.5	<0.5	<0.5	<1.5	<1	ND
	1/19/2004	<50	<0.5	<0.5	<0.5	<1.5	<1	ND
	5/4/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	7/13/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-4	5/27/2003	<50	<0.5	<0.5	<0.5	<1.5	<1	ND
	1/19/2004	<50	<0.5	<0.5	<0.5	<1.5	<1	ND
	5/4/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	7/13/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND
HP-1	5/4/2004	<50	0.69	<0.5	<0.5	<0.5	<0.5	ND
HP-2	5/4/2004	<50	0.95	0.51	<0.5	<0.5	<0.5	ND
HP-3	5/4/2004	<50	<0.5	<0.5	<0.5	<0.5	<0.5	ND

Notes:

TPHg = Total Petroleum Hydrocarbons as Gasoline
Other Fuel Oxygenates = TBA, DIPE, ETBE, TAME
ND = Not detected

TABLE 4
NATURAL ATTENUATION PARAMETER SAMPLING RESULTS
921 West Hamilton, Campbell, CA

Well Number	Date Sampled	Concentration (mg/l)				
		Ferrous Iron	Methane	Nitrate	Sulfate	Dissolved Oxygen
MW-1	5/4/2004	<0.1	0.00481	3.8	53	2.0
	7/13/2004	NM	NM	NM	NM	1.0
	3/21/2005	NM	NM	NM	NM	2.9
	5/17/2005	NM	NM	NM	NM	3.7
MW-2	5/4/2004	<0.1	0.00153	4.1	54	3.5
	7/13/2004	NM	NM	NM	NM	2.6
MW-3	5/4/2004	<0.1	<0.001	4.5	53	3.3
	7/13/2004	NM	NM	NM	NM	4.1
MW-4	5/4/2004	NM	NM	NM	NM	3.6
	7/13/2004	NM	NM	NM	NM	3.6

Notes:

Samples analyzed for inorganic compounds by analytical laboratory methods.
Dissolved oxygen concentrations collected by field measurement.

NM = Not measured

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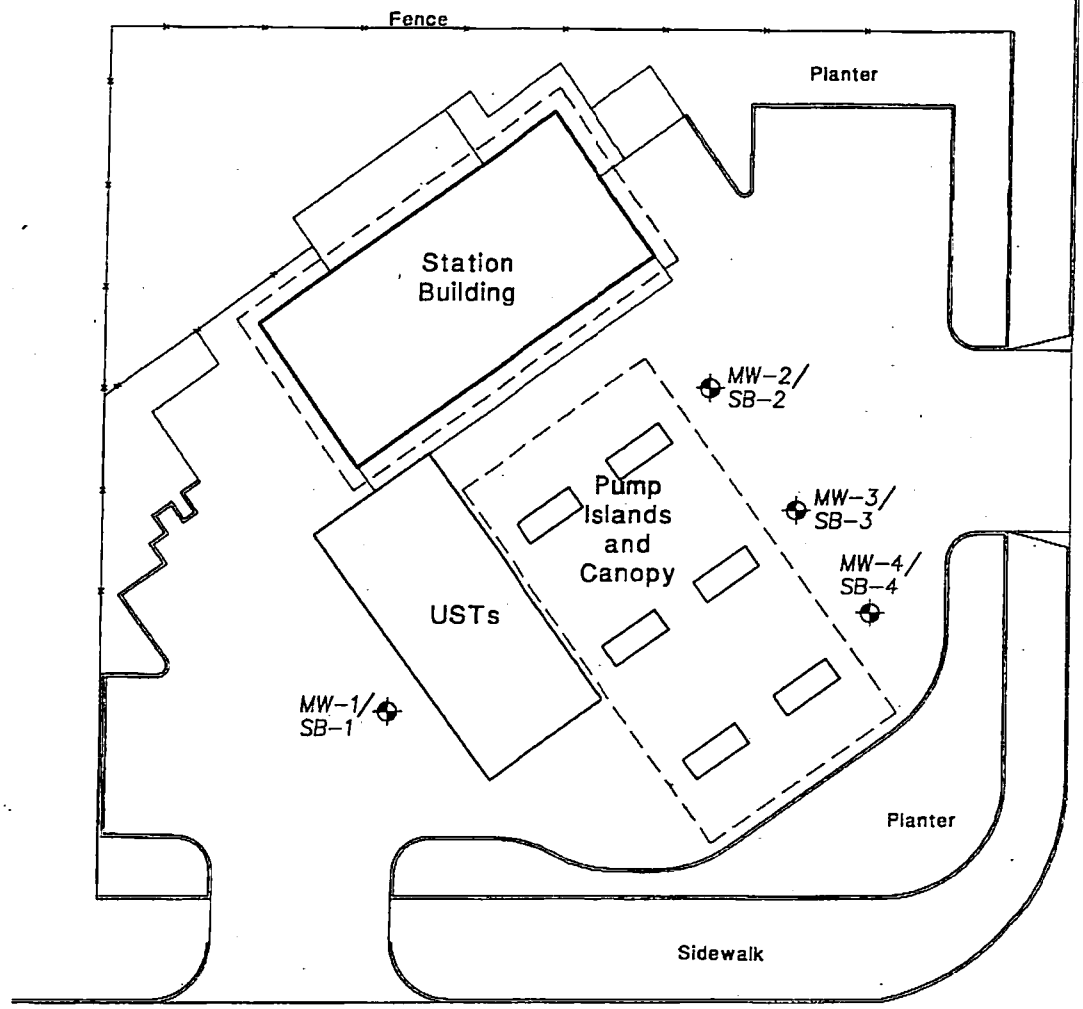

MAP SOURCE:
O.K.O. ENGINEERING INC., 3/17/98

EXPLANATION

⊕ Soil boring and monitoring well location

0 30'

NORTH

Figure 1: Site Map

AZURE ENVIRONMENTAL AZ142-020

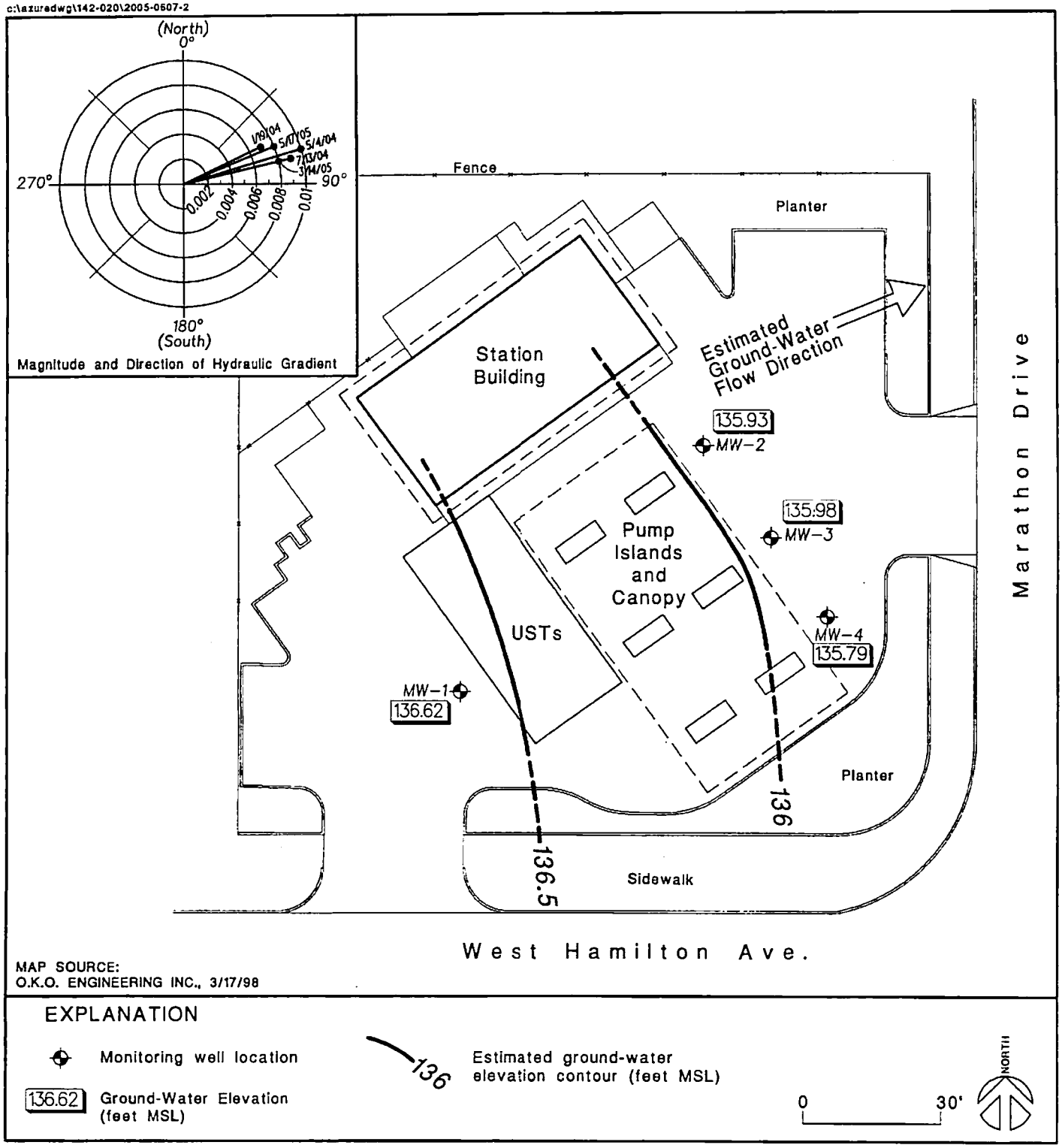

Figure 2: Ground-Water Elevations Measured on May 17, 2005

AZURE ENVIRONMENTAL AZ142–020

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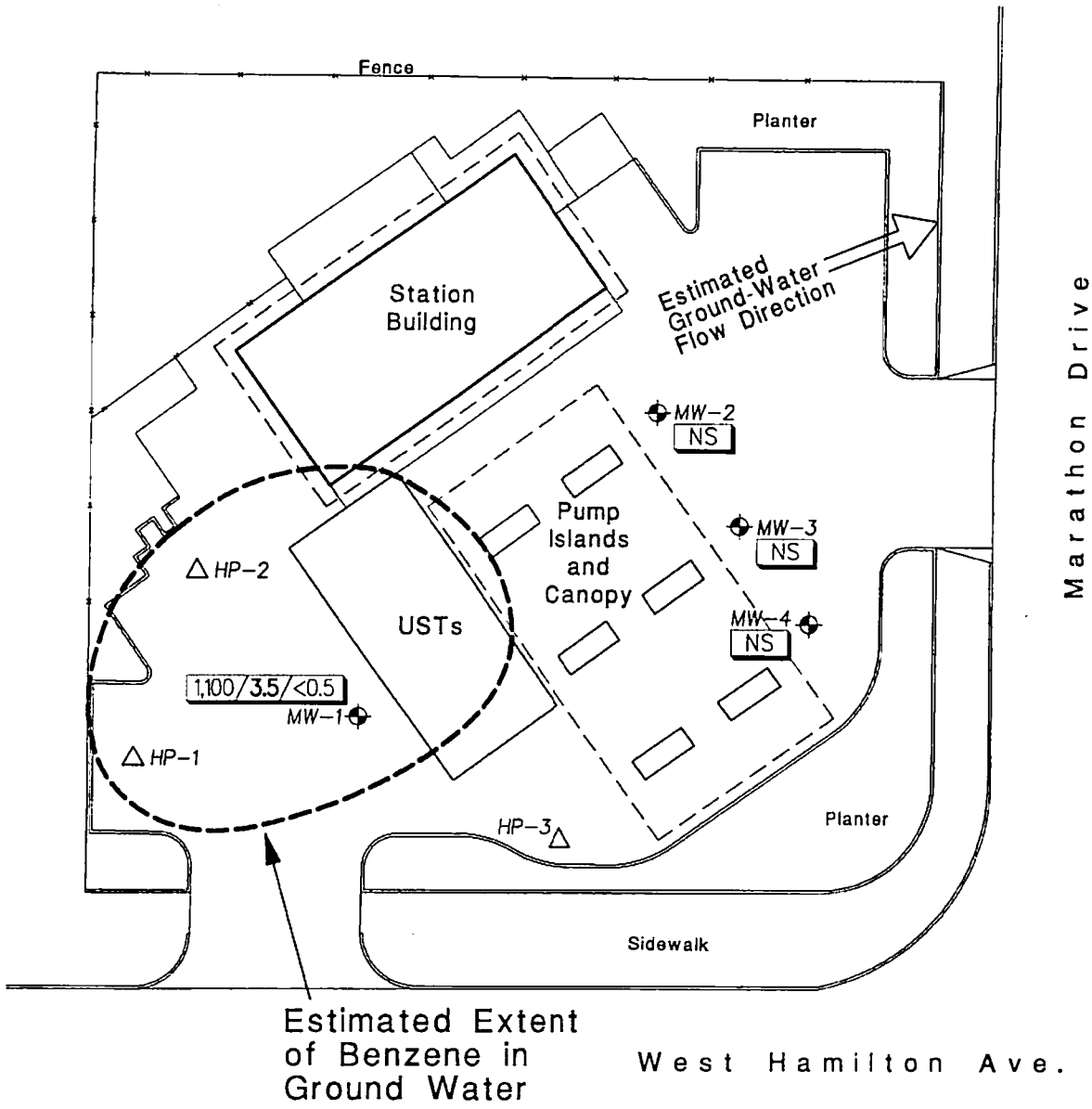

MAP SOURCE:
O.K.O. ENGINEERING INC., 3/17/98

EXPLANATION

- Monitoring well location
- Grab ground-water sample location (5/4/04)

Concentration (ug/l) Chemical

1,100/3.5/<0.5 — TPHg / Benzene / MTBE

NS — Not sampled

0 30'

NORTH

Figure 3: Ground-Water Sampling Results - Second Quarter, 2005

AZURE ENVIRONMENTAL AZ142-020

APPENDIX A

LABORATORY CERTIFICATES

KIFF ANALYTICAL LLC

Report Number : 43873
Date : 5/24/2005

Jeff Hennier
Azure Environmental
85 Bolinas Road, Suite 5
Fairfax, CA 94930

Subject : 1 Water Sample
Project Name : Tesoro Campbell
Project Number : AZ 142-020

Dear Mr. Hennier,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 43873
Date : 5/24/2005

Project Name : Tesoro Campbell
Project Number : AZ 142-020

Sample : MW-1 Matrix : Water Lab Number : 43873-01
Sample Date :5/17/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**3.5**	0.50	ug/L	EPA 8260B	5/23/2005
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	5/23/2005
Ethylbenzene	**8.3**	0.50	ug/L	EPA 8260B	5/23/2005
Total Xylenes	**2.8**	0.50	ug/L	EPA 8260B	5/23/2005
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	5/23/2005
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	5/23/2005
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	5/23/2005
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	5/23/2005
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	5/23/2005
TPH as Gasoline	**1100**	50	ug/L	EPA 8260B	5/23/2005
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	5/23/2005
4-Bromofluorobenzene (Surr)	94.9		% Recovery	EPA 8260B	5/23/2005

Approved By: Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43873

Date : 5/24/2005

QC Report : Method Blank Data

Project Name : **Tesoro Campbell**

Project Number : **AZ 142-020**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	5/23/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	5/23/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	5/23/2005
Toluene - d8 (Surr)	106		%	EPA 8260B	5/23/2005
4-Bromofluorobenzene (Surr)	95.2		%	EPA 8260B	5/23/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43873

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 5/24/2005

Project Name : **Tesoro Campbell**

Project Number : **AZ 142-020**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	43881-02	<0.50	39.7	39.7	44.2	44.4	ug/L	EPA 8260B	5/23/05	111	112	0.346	70-130	25
Toluene	43881-02	<0.50	39.7	39.7	46.4	46.6	ug/L	EPA 8260B	5/23/05	117	117	0.354	70-130	25
Tert-Butanol	43881-02	<5.0	198	198	216	215	ug/L	EPA 8260B	5/23/05	109	108	0.374	70-130	25
Methyl-t-Butyl Ether	43881-02	<0.50	39.7	39.7	36.0	37.9	ug/L	EPA 8260B	5/23/05	90.8	95.5	4.96	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43873

QC Report : Laboratory Control Sample (LCS)

Date : 5/24/2005

Project Name : **Tesoro Campbell**

Project Number : **AZ 142-020**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	5/23/05	113	70-130
Toluene	40.0	ug/L	EPA 8260B	5/23/05	114	70-130
Tert-Butanol	200	ug/L	EPA 8260B	5/23/05	110	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	5/23/05	74.5	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

2795 2nd Street, Suite 300
Davis, CA 95616
Lab: 530.297.4800
Fax: 530.297.4808

Lab No. 43873 Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Jeff Hennier
Company/Address: AZURE ENV. 85 Bolinas Rd. Suite 5, Fairfax,
Phone No.: 415 460 1561 FAX No.: 415 460 1569
Project Number: AZ 142-020 P.O. No:
Project Name: Tesoro Campbell
Project Address: 921 W. Hamilton Ave. Campbell, CA

California EDF Report? ☑ Yes ☐ No

Recommended but not mandatory to complete this section:
Sampling Company Log Code: . . .
Global ID: . . . . . .
EDF Deliverable To (Email Address): azureenv@aol.com
Sampler Signature:

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Container: SLEEVE	Preservative: HCl	Preservative: HNO_3	Preservative: ICE	Preservative: NONE	Matrix: WATER	Matrix: SOIL	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2) TOTAL (X) W.E.T. (X)	TAT: 12 hr/24 hr/48 hr/72 hr/1 wk	For Lab Use Only
MW-1	5/17/05	1645	3		X		X		X							X									01

Relinquished by:	Date	Time	Received by:	Remarks:
	5/18/05	1500		
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill to:
	051905	1218	Jason Alexander Kiff Analytical LLC	

Distribution: White - Lab, Pink - Originator

Forms/coc 121001.fh9

Sample Receipt 12.4°C ONH 051905 1205 IR-Inocoolant present

APPENDIX B

FIELD SAMPLING DATA SHEETS

WATER QUALITY SAMPLING INFORMATION

Date: 5/17/05 Well No: MW-1 Sampled by: DManning/BWelk
Project: CAMPBELL Project No: AZ-142-020
Sampling method: disposable bailer

GROUNDWATER

Well diameter (in.) 2
Well elevation (ft.)
Depth to static water (ft.) 47.85
Water level elevation (ft.)
Well casing depth (ft.) 63.50
Water volume in well (gals)
Pump inlet depth (ft)

SURFACE WATER

Stream width (ft.)
Stream depth (ft.)
Stream velocity (cfs.)
Rained Recently (?)
(2-in) Casing=0.16 gals/ft.
4-in. Casing=0.65 gals/ft
6-in Casing=1.47 gals/ft

Sketch of Well Location

Analyses requested: TPH-G/BTEX 8015 Fuel Oxygenates 8260
No. & types of sample bottles used: 3 VOAs Method of shipment: cooler

TIME	DEPTH TO WATER (FT.)	VOLUME WITHDRAWN (GALS)	TEMP (deg. F.)	pH	Dissolved Oxygen (O2 mg/l)	CONDUCTIVITY (X100)	TURBIDITY	REMARKS
1600	47.85	0						Start
		2.5	68.7	6.44	3.7	5.35	High	No odor
		5.0	67.3	6.59		4.95	High	No odor
		7.5	67.0	6.39		5.22	High	No odor
1645								SAMPLED

APPENDIX C
FIELD METHODS AND PROCEDURES

Monitoring Well Sampling

Monitoring well MW-1 was sampled on May 17, 2005. During well purging prior to sampling, ground-water parameters (pH, specific conductance, DO and temperature) were monitored and recorded on field logs. Purging continued until parameters stabilize. After purging a minimum of three well volumes, the well was sampled using a new disposable bailer. Ground-water samples were decanted from the bailer into clean, laboratory-provided sample bottles and placed in a chilled cooler for transport to the analytical laboratory under strict chain-of-custody procedures. Water removed from the well during sampling was temporarily stored on-site in a drum and for off-site disposal at an appropriate disposal facility.

Water-Level Measurement

Water-level measurements were collected from monitoring wells MW-1 through MW-4 on May 17, 2005 to obtain data of ground-water flow direction and gradients at the Site. Depth to water measurements were collected using an electric water-level meter. Ground-water elevations were calculated based on the measured depths to ground water.